1982 REVIEW

MISSOURI HIGHWAY AND TRANSPORTATION COMMISSION

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Missouri Highway and Transportation Commission

Required by statute, this report of 1982 accomplishments, highway and transportation system status and future goals is made to the Governor and Legislature of Missouri. It is also intended to be a guide into the inner workings of the Department for any citizen who wishes to know where, when and how his tax dollars are used. An informed and interested public is vital to the continued development and operation of Missouri's highway and transportation programs. Accordingly, copies of this report are available to the news media, public officials and interested citizens so far as published copy numbers permit. The Department hopes the report will increase taxpayer understanding of Missouri's highway and transportation administration. Any inquiries are welcome.

Contents

JAY B. DILLINGHAM, Chairman
Democrat from Kansas City
54th Commissioner
Term expires October 13, 1983

ROY B. GOODHART, Vice-Chairman
Republican from Hannibal
55th Commissioner
Term expires October 13, 1983

ALBERT C. RILEY
Democrat from New Madrid
45th Commissioner
Term expires December 1, 1983

EUGENE J. FELDHAUSEN
Republican from Platte City
57th Commissioner
Term expires December 1, 1985

CARL E. YATES
Democrat from Springfield
56th Commissioner
Term expires December 1, 1985

WILLIAM F. SCHIERHOLZ JR.
Republican from St. Louis
58th Commissioner
Term expires December 31, 1988

Missouri Highway and Transportation Commission

ROBERT N. HUNTER
Chief Engineer

BRUCE A. RING
Chief Counsel

MARI ANN WINTERS
Commission Secretary

Throughout 1982 six men met once a month to decide Missouri's highway and transportation systems future. They were the bipartisan Highway and Transportation Commission. As governing body for the Department, they established policies and furnished overall guidance for the men and women who carried out the work.

The Governor, by and with Senate consent, appoints Commission members to staggered six-year terms. No more than three members of the Commission can, as a matter of law, be members of the same political party.

The Chief Engineer, Chief Counsel and Secretary are appointed by the Commission. All other appointments to the Department are made by the Chief Engineer and the Chief Counsel, with Commission approval.

The Centennial Road Law of 1921 created and empowered the Missouri Highway Commission (the Missouri Highway and Transportation Commission since a merger with the Department of Transportation) with duties and powers to govern the Department. Those responsibilities include:

*Supervise highways and bridges constructed, improved and maintained by state money or monies appropriated by the U.S. government, in keeping with acts of Congress.

*Make rules and regulations consistent with law, fixing all duties of persons employed by the Commission.

*Aid county highway engineers or officials of other civil subdivisions in establishing gradients and alignments, and in preparing suitable systems for highway and bridge maintenance.

*Authorize preparation of standard plans, specifications and estimates for repair and improvement of highways and construction and repair of bridges by civil subdivisions.

*Investigate and determine best construction and maintenance methods of roads and bridges.

*Aid at all times in promoting highway improvement.

*Let all contracts for state highway construction or improvement.

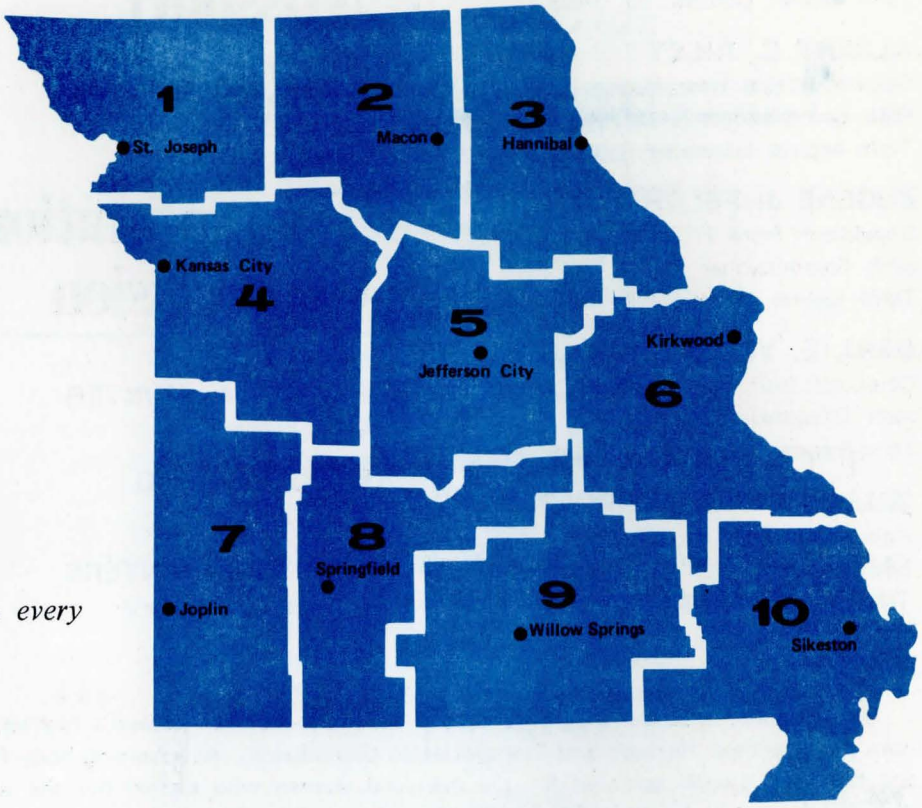
*Prescribe an auditing and accounting system for all road and bridge monies for highway officials use.

*Construct under its own direction all state roads, culverts and bridges.

*Compile statistics relating to public highways throughout the state.

Assumed responsibilities since the Transportation Department's merger with the Department include developing other state transportation modes: transit, waterways, rails and aviation. The Commission will consider applications for the organization of city or county port authorities, as well as appointment of bridge commissions.

Organization and Administration



Ten Districts insure Department highway and transportation attention to every area in Missouri.

Missouri's state Highway and Transportation Department shoulders responsibilities of five viable transportation alternatives available to Missourians--highways, aviation, waterways, transit and railroad. Those responsibilities include the total operation of the 32,000 mile highway system, including highway location, design, construction and maintenance.

In addition, the Department cooperates and coordinates with owners and operators of the other four modal systems in the development and improvement of airports, rail facilities, ports and the operational cost of transit systems. Key here also is the administration of state/federal programs and funds available with these modes.

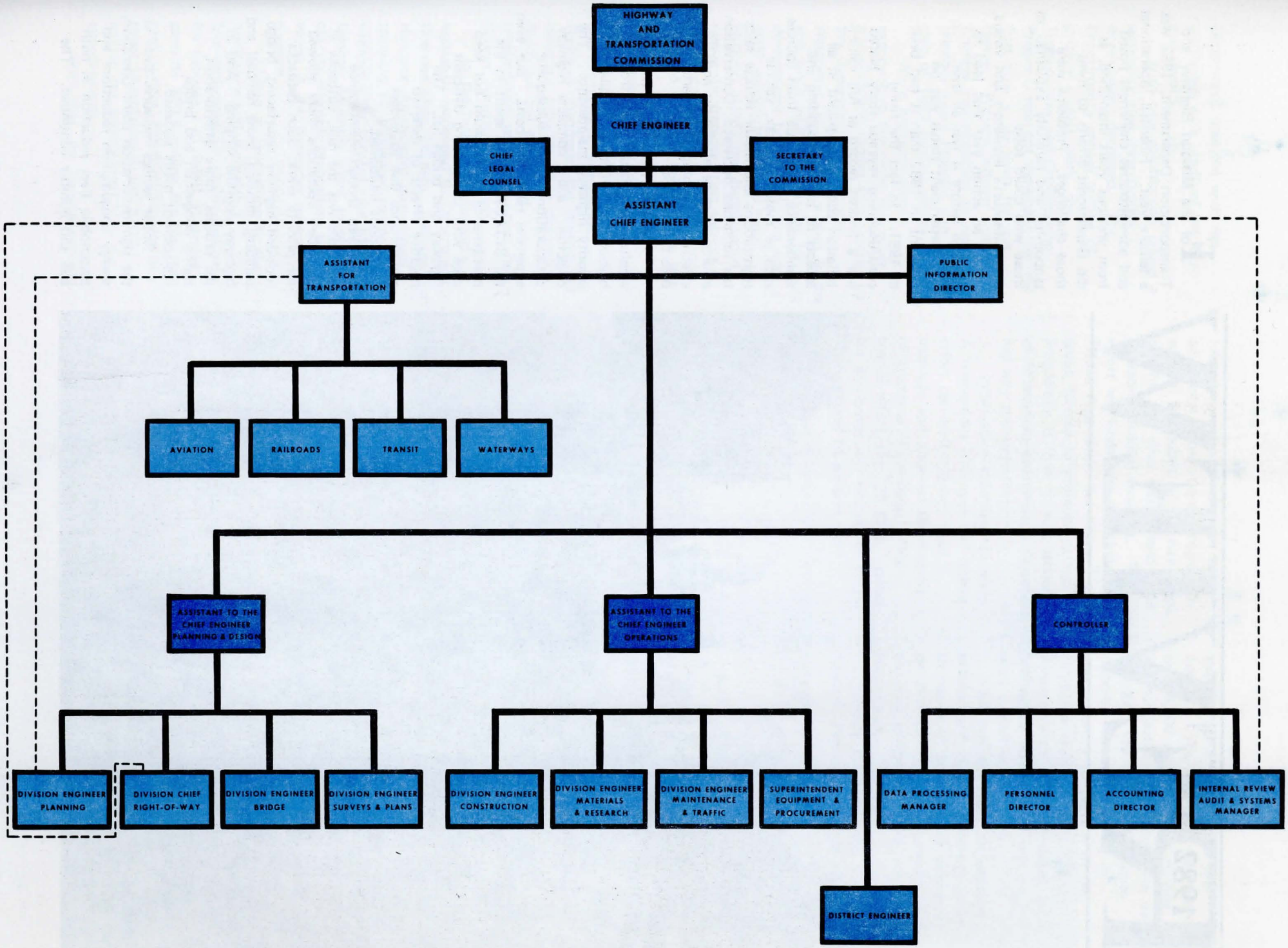
The Highway and Transportation Department became such as of January 1980 when voters decided to merge the previously separate Highway and Transportation Departments by passing Constitutional Amendment #2 in November 1979. The Department operates under a decentralized organization with the Headquarters Office in Jefferson City. This office provides staff assistance and functional control for the various Departmental tasks to the 10 geographic Districts of the Department.

The Divisions within the Headquarters Office are responsible for bridge design and highway planning for the state. There are no counterparts for these particular Divisions in the Districts. Decisions about highway construction, maintenance and operations are made at the District level.

Encompassing about 12 counties, each District contains about 10 percent of the total road mileage in the highway system. A District Engineer is responsible for administering all activities in his District.

Transportation modes other than highways are established as units within the Headquarters Office and report to an Assistant Transportation Director. These units carry out the statewide planning for these modes--there are no counterparts in the Districts.

District offices are located in St. Joseph, Macon, Hannibal, Kansas City, Jefferson City, Kirkwood, Joplin, Springfield, Willow Springs and Sikeston.


HIGHWAY AND TRANSPORTATION COMMISSION
CHIEF ENGINEER
CHIEF LEGAL COUNSEL
SECRETARY TO THE COMMISSION
ASSISTANT CHIEF ENGINEER
ASSISTANT FOR TRANSPORTATION
PUBLIC INFORMATION DIRECTOR
AVIATION
RAILROADS
TRANSIT
WATERWAYS
ASSISTANT TO THE CHIEF ENGINEER PLANNING & DESIGN
ASSISTANT TO THE CHIEF ENGINEER OPERATIONS
CONTROLLER
DIVISION ENGINEER PLANNING
DIVISION CHIEF RIGHT-OF-WAY
DIVISION ENGINEER BRIDGE
DIVISION ENGINEER SURVEYS & PLANS
DIVISION ENGINEER CONSTRUCTION
DIVISION ENGINEER MATERIALS & RESEARCH
DIVISION ENGINEER MAINTENANCE & TRAFFIC
SUPERINTENDENT EQUIPMENT & PROCUREMENT
DATA PROCESSING MANAGER
PERSONNEL DIRECTOR
ACCOUNTING DIRECTOR
INTERNAL REVIEW AUDIT & SYSTEMS MANAGER
DISTRICT ENGINEER

1982 REVIEW

For the Missouri Highway and Transportation Department, 1982 was a telltale year. Financial, operational and administrative challenges posed from previous years intensified, as did Department efforts to meet those challenges. Problems were pinpointed and carefully explained to those who could solve them--Missouri's legislators and voters. It was an action year that lead to reaction before it was all over.

Department status was no different in 1982 than it had been in 1981. In fact the rising costs/declining revenue story blared like a broken record at full volume. Inflation continued upward in all aspects of highway building and maintenance. Revenue from sources such as motor fuel tax, vehicle registrations and motor vehicle sales tax remained depressed. Conservation efforts to more efficiently and effectively accomplish Department objectives continued.

Again manpower and financial emphasis was taken away from highway construction and placed on priority highway maintenance. The objective: avoid complete highway deterioration and its subsequent expensive rebuilding costs. But even the $137,592,329.16 spent in the maintenance effort could not keep pace with the growing deficient highway and bridge list. The negative effects of deferred maintenance due to budget restrictions multiplied.

Even though maintenance emphasis was the rule, cutbacks in secondary operations there allowed for priority work. Such cutbacks included highway resurfacing, bridge painting, mowing, snow removal and highway edgeline striping. And in the process, more deterioration, traffic congestion and bridge replacement needs surfaced.

Dollar savings measures such as the sign reclamation plant operation, energy consumption reductions and automobile fleet reduction in both size and number continued. The

Department operated with less manpower as a result of attrition and layoffs.

With new construction taking a secondary role, new project development decreased. The Department's annual outline of priority project work, the Right-of-Way and Construction Program, was not developed for the first time in 22 years for this reason. Projects leftover from finances not stretching to meet the previous year's Program also took care of 1982 funding ability.

While highways were experiencing numerous ills, other transportation modes administered by the Department fared better. Waterways, in fact, got a shot in the arm when additional monies for port development became available with a $600 million state bond issue. Missouri elderly and handicapped non-profit transportation services were subsidized with state-federal matched funds to help provide this essential transportation. Aviation administered funds for publicly-owned airport capital improvements or maintenance. Railroads monitored the Amtrak rail passenger program while channeling funds for rail renewal or rehabilitation under the Local Rail Service Assistance Program.

In the meantime, Missouri's legislators responded to Department financial pleas for help. Because the Hancock Amendment government spending lid prohibited raising taxes without voter consent, the 81st General Assembly voted to place a gas tax increase proposition before voters in the November general election.

Known as Proposition B, the measure would authorize a four-cent-per-gallon motor fuel user fee increase. If passed, it would generate $89.8 million for the state road system, $15.6 million for city street improvements and $10.4 million for county road improvements.

With that, the Department and related user group industries began an intense informational program to educate the public of highway needs, benefits and what both would mean to each individual motorist. This effort was under the direction of the "Road Restoration Committee," a group formed to promote passage of Proposition B from a cross section of Missourians interested in Missouri's highway transportation.

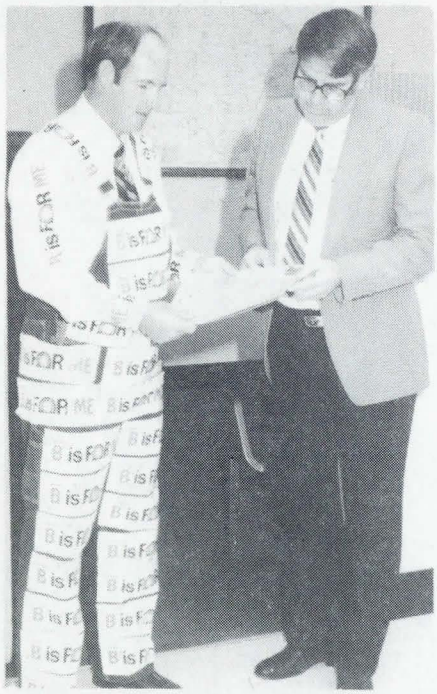
Information saturated the state. A tremendous employee and retiree effort delivered highway need messages and obtained the support of countless Missourians. This special effort, the "26 Club," called for employees and retirees to obtain 26 signatures of support after explaining the issue's terms and benefits. The idea being that with over 6,000 employees and retirees, the cumulative effect could win over 156,000 "yes" votes. Employee response was overwhelming as approximately 67 percent of the employees participated. Approximately 3,376 envelopes, each bearing 26 signatures of support, were turned in.

All over the state, Department officials and District Engineers spoke to numerous organizations, appeared on television and radio programs and obtained endorsements for the Proposition.

Despite the widespread effort, however, Proposition B was defeated

Chief Engineer Robert Hunter proudly shows Secretary of State James Kirkpatrick the "26 Club" support for Proposition B. Kirkpatrick, a long-time road advocate, also voiced his support for the Proposition during the campaign.

Employee support for Proposition B was tremendous as evidenced above by Bob Sfreddo (left), who donated use of his 1968 Chrysler for a campaign sign masterminded by Bill Call (second from right) and Jim Plumb (right). All are from the Headquarters Office Surveys and Plans Division.



Another example of employee support was found in Lynn Shaffer's Halloween costume. Here the Headquarters Office Surveys and Plans employee shows it and his "26 Club" support envelopes to Public Information Director Art Taylor.

by a 65 percent to 35 percent margin. Chief Engineer Robert Hunter attributes its defeat to voter confusion with another measure on the ballot--Proposition C. This measure, which did pass voter approval, generated education revenue by increasing the state sales tax one cent.

"The language of Proposition C stated it would reduce property taxes and also provide money for both education and highways," Hunter says. "This seemed an attractive package to people."

However, the money provided highways from Proposition C was not intended to be a primary revenue generator. This measure provides $14 million to the Department via an extra one-cent sales tax collected on vehicle sales. Proposition B would have generated $89.8 million.

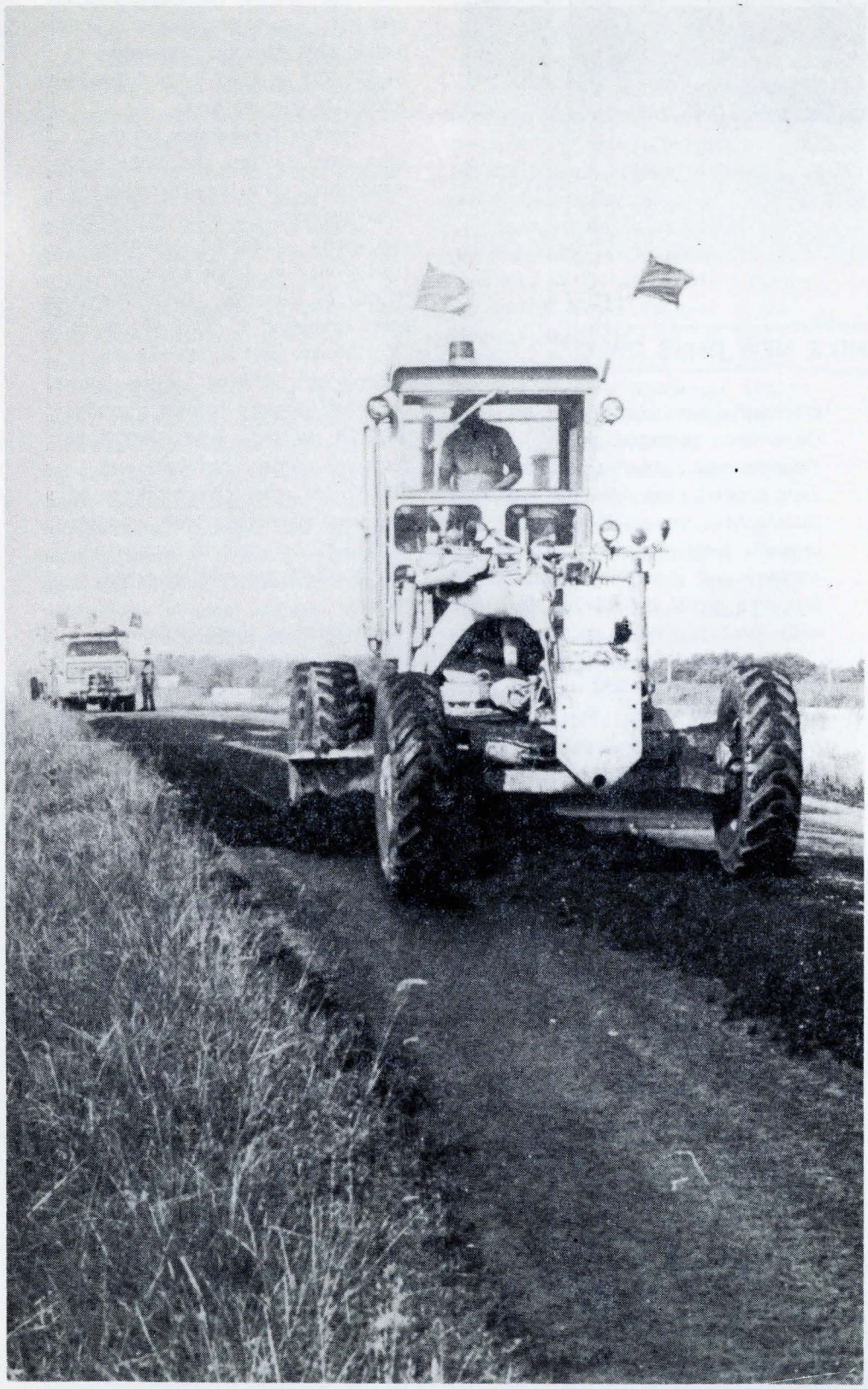
This is the second time in recent years a gas tax increase was defeated by voters. A proposal providing a three-cent-per-gallon increase was defeated in 1978. Hunter says only about 12 percent of the people favored the proposal then. This package would have directed 10 percent of the gas tax to counties and there was strong opposition to that idea, Hunter says.

What lies ahead when the funding need and deterioration problems can only grow? "We'll regroup and go back again for another try as soon as possible," Hunter says. "With 36 other states having increased their revenue in recent years, the idea of a gas tax is becoming more acceptable all the time," Hunter says.

"People are realizing the problems we as a state face. The situation becomes a little clearer each time motorists drive on rough road.

"Over the years we have enjoyed an excellent reputation from the nation's motoring public," Hunter continues, "but now that is starting to go the other way. It's perplexing, but we are not going to give up."

PROGRAMS



SLIGHT TRAVEL INCREASE POSTED IN 1982

Travel on Missouri's state highway system increased over 1981--but just barely. Department statistics indicate a 0.7 percent increase for 1982. Motorists logged 25.5 billion miles by the end of the year, an increase of 186 million miles over 1981's total.

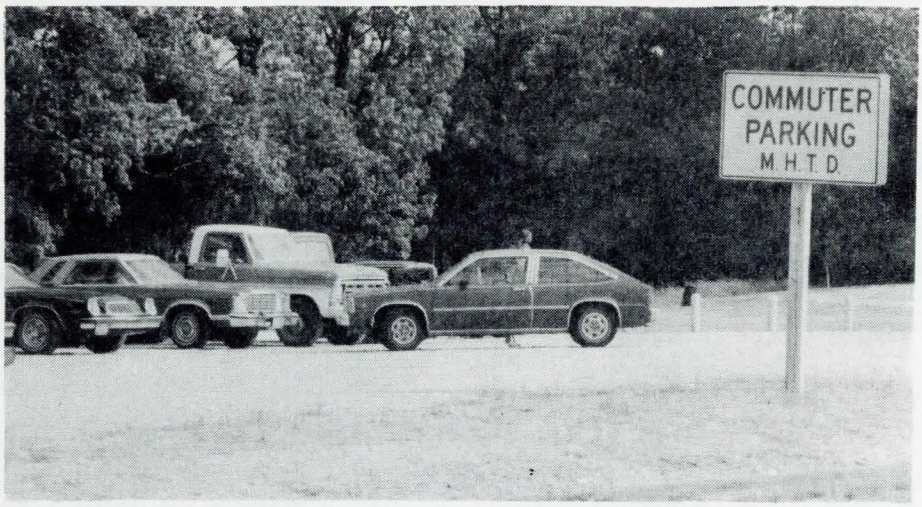
Specifically, travel increased 216 million miles on the Interstate system. On the supplementary highways, a 42-million-mile increase was noted. On the other hand, travel on the primary system decreased 71 million miles.

Summer travel made July the highest travel month of the year with 2.4 billion miles. January registered the lowest at 1.7 billion miles. All months saw a travel increase except January and February when compared to 1981.

Chief Engineer Robert N. Hunter attributes the travel increase to declining fuel prices, successful conservation efforts by Missouri drivers and unseasonably mild weather in the last few months of 1982.

Unfortunately the travel increase did not automatically signal an increase in fuel use and accordingly Department revenue. The state's share of Missouri's seven-cent-per-gallon motor fuel tax revenue in 1982 was more than $4 million lower than 1981. Prior to fuel-efficient automobiles and motorist fuel conservation attempts, motor fuel use and travel figures rose and fell at approximately the same rate.

Traffic volume data is obtained from a number of permanent traffic recording stations the Department operates throughout the state.



COMMUTER LOTS EXPAND WHILE NEW ONES OPEN

Sufficient need and available right-of-way paved the way for existing commuter parking lot expansions and new lot additions. Department employees constructed six new lots and expanded two others. By the end of 1982, 74 commuter parking lots provided 4,117 spaces throughout the state for commuting motorists.

The two expansions were made in St. Charles and Lafayette Counties. The former involved a lot on Interstate 70 located at Route T. Thirty-four additional spaces were added, bringing the total there to 66. The latter expansion increased a lot on Interstate 70 and Route 131 by 55 spaces. A total of 127 motorists could then take advantage of this lot.

The six new lots, as all others previously, were constructed by Department personnel on Departmental right-of-way. They were located predominately near metropolitan areas. They offer centrally located parking clear of roadway and shoulders. Most feature a gravel surface and fencing with concrete parking markers.

The commuter parking lot program began in 1973 as a result of the energy crisis. The objective was to decrease the number of automobiles on highways during peak traffic periods in or near metropolitan areas, and to decrease the amount of fuel used. Since then the lots have been built as studies indicate a need and the necessary right-of-way becomes available.

1982 NEW COMMUTER PARKING LOTS

Location	Number Spaces
Route 63, north of Route 133, Osage County	25
Interstate 70 at Zumbehl Road, St. Charles County	124
Route 67 and Route 8, St. Francois County	53
Interstate 70 at Route H, Warren County	61
Route 60 and Route 39, Lawrence County	20
Route 60 at Route NN, Webster County	18

HIGHWAY CLUTTER CONTINUED

The litterbug population was alive and well in 1982 according to year-end Department figures. "Litter pickup cost Missouri taxpayers $1,331,033 in 1982," Chief Engineer Robert N. Hunter says.

Further breakdowns of that litter cost illustrate the problem's magnitude. The heavily-traveled Interstate was the most litter-prone and costly. Cleaning Interstate right-of-way in urban areas cost $1,887.73 per mile. Rural Interstate costs amounted to $221.43 per mile.

Primary and supplementary systems also suffered. Litter control on urban primary highways totaled $412.24 per mile, while that figure for rural primary highways was $46.17 per mile. Expenditures on the supplementary system amounted to $13.35 per mile in rural areas and $162.44 per mile in urban regions.

Hidden in those costs were some interesting statistics. Maintenancemen spent 109,820 manhours picking up by hand what was placed there by hand. This labor cost the Department $1,015,296.04, at a rate of $10.23 per manhour. Equipment usage amounted to $258,002.32. Material costs for such things as trash bags and dumping fees cost $57,734.69.

These costs are incurred year-round since litter pickup is an ongoing process. On rural roads where traffic and litter is light, one litter pickup in February or March is sufficient. Where traffic is heavier and larger pieces of litter are more prevalent, a complete cleanup is done twice a year with larger litter picked up about once a week.

In metropolitan areas big pieces of litter are picked up about twice a week. A complete cleanup is done once a month to once every three months.

While St. Louis City cost taxpayers the most in terms of litter

pickup due to a high traffic volume, other litter-prone areas included roads leading to landfills and nightclubs. Intersections were also a problem area since litter is easy to discard when autos slow or stop.

And any and everything has been found alongside the roads. The largest trash population by far belongs to aluminum cans, which compose over 50 percent of collected trash. Other items include such things as bottles, paper, tires, bricks, boxes and plastic objects. Even baby diapers and pieces of car bodies have been found. All are collected and disposed at Department of Natural Resources approved dumps.

The Department does receive some outside help occasionally. Aluminum can hunters help clear right-of-way and earn a little extra profit for themselves while combing the roadsides. Some organizations such as the Boy Scouts occasionally have cleanup days, including highway right-of-way in their projects. In this case, the Department furnishes the organizations with bags, and the Department picks them up after they are filled.

But even with occasional help, litter pickup is both dirty and dangerous work. The potential for injury increases every summer when highway mowers strike unseen objects, winging debris away from the operation. Not only does it place people's health in jeopardy, there is damage done to tractors resulting in needless downtime.

While laws exist to stop littering, they are extremely hard to enforce. "It almost requires eye witness accounts before we can prosecute," Hunter says.

A somewhat effective deterrent has been writing to individuals suspected of littering. Often there are enough letters and mail in the trash to determine who the trash might belong to. But for the soda can here and the hamburger wrapper there, it is almost impossible to make that determination.

"All we can do is keep the seriousness of the situation before the public, in hopes of reaching those littering," Hunter says. "The bad habits of a few are costing all Missourians. This money should be going to maintenance and construction where it would do motorists the most good. The next time anyone is tempted to roll down a window and toss something out, I wish he'd remember that."

COMMUTER LOT USAGE DROPS

Carpooling to stretch gasoline dollars evidently lost some of its appeal in 1982. Quarterly usage reports indicate Department-provided commuter parking lots weren't used as much as they were in 1981.

A steady usage decline was recorded for the first three quarters of 1982. Only the last quarter indicated motorists were stepping up their use of this economical alternative to high transportation costs.

Previously in 1981, usage increases were noted in three quarters as opposed to a decline in the third quarter.

Usage fluctuations are determined by comparing one quarter's usage with the previous quarter. This provides the most up-to-date use reflection since lots are continually expanded and new ones are added.

Specifically, the first quarter of January, February and March saw a 3 percent decrease under the preceding three months. At that time 2,379 out of 3,858 spaces were utilized in 69 lots. Throughout

October, November and December 1981, 2,465 out of 3,858 spaces were utilized in the same 69 lots.

April, May and June posted another decline. Usage decreased 2 percent under the first quarter. Of 4,026 available parking spaces, 2,333 were actually used. During this time three new lots were added and one was enlarged.

Still another decline was observed in the third quarter July, August and September figures. The lots were used 1 percent less than the previous quarter. Out of 4,065 parking spaces, 2,309 were used by commuters. Again two new lots were added and the number of spaces in two existing lots were adjusted.

Finally, the only increase of the year was seen in fourth quarter usage. October, November and December saw a 4-percent increase. One new lot was added and one closed due to highway construction during this time, as 2,405 spaces were used out of 4,117 available.

CONSTRUCTION COSTS DROP

Highway construction costs dropped 5.4 percent in 1982 while the number of bids per project rose slightly, Department figures indicate.

During 1982, bids were taken on 151 projects worth $136.9 million. The average number of bids per project was 5.4. However, in 1981 bids were taken on 134 projects worth $172.2 million. The average number bids per project was 5.3.

The cost decrease is attributable to lower prices for construction materials such as concrete and steel, Chief Engineer Robert N. Hunter says.

A comparison of the 1982 fourth quarter with the same period in 1981 shows a 2.6 percent increase in construction costs. During the fourth quarter of 1982, there were 4.6 bids per project. That figure for the 1981 fourth quarter was 4.9.

SIGN RECLAMATION SAVINGS OUTDISTANCED BY VANDALISM

The first year of the Department's sign reclamation plant operation in 1978 showed some impressive figures, but 1982 can boast of even better savings. There were 55,942 signs reclaimed in 1982 and the total savings to the Department and Missouri amounts to approximately $346,400. This is an increase over 1981 when 47,390 signs were reclaimed. The total savings to the Department and the state in 1981 was $286,660.

The reclamation process basically involves refinishing the existing signs, as well as the secondary process of salvaging reusable portions for making smaller signs. The plant's operations have been able to sharply reduce the need to purchase new aluminum for road signs. And now 79 percent of the metal signs provided the Districts are signs from the reclamation plant.

What alarms the Department is that many of these signs passing through the reclamation plant are there because they have been vandalized. Sign vandalism, besides being a dangerous practice that could easily lead to injury or death, is expensive.

The sign vandalism encountered by the Department last year on a statewide basis cost Missouri highway users an estimated $843,600. That is up from 1981 when it cost $731,000. Department engineers say about 56 percent of all sign replacement in the state is due to vandalism.

Signs placed along rural highways or near large schools or colleges are most subject to the abuse--an understandable situation since a great many teenagers think its fun to take a shot at the signs. The most common type of damage accordingly is bullet holes. A close second is damage caused from spray paint. And then some signs are simply stolen.

Each sign that must be replaced whether stolen, damaged, vandalized or outdated costs an average of $11.67, which is down from 1981 when it cost the Department $12.44. According to Department officials the cost will vary depending on the size and the type of sign that is replaced.

Approximately six dump truck loads of signs no longer usable were received during 1982 at the sign reclamation plant from each of the Department's 10 Districts.

OVER 70 PERCENT OF BRIDGES DEFICIENT

In 1982 Department officials saw Missouri steadily losing ground in its fight against deteriorating and deficient bridges. The situation was growing worse as the number of bridges falling into critical condition and those in need of repair have increased yearly.

A 1982 federal study confirmed this statement, reporting Missouri as the second highest in number of deficient bridges in the country--almost 71 percent of its bridges are deficient.

This percentage included all city, county and state bridges. Missouri's state highway system contains more than 9,400 bridges. City and county systems contain 14,500 bridges.

"The Department inspects bridges annually," Chief Engineer Robert Hunter says. "From these inspections the deck condition as well as the condition of the superstructure and substructure are rated."

A sampling of Department figures also indicate the situation is steadily growing worse. Functionally obsolete, narrow bridges on Primary routes totaled 609 during 1982. Bridges with rotting, creosoted timber pile bents or timber decks added up to 878 deficiencies. Fifty-one state-acquired, county-built bridges with used in-place trusses are either too narrow or too light.

Other examples include 188 deficient precast slab bridges (type of bridge where the deck and supporting members are formed elsewhere and assembled at the bridge site). Designed for a fifteen-year-life span, all but nine of these type bridges have reached or passed this limit.

Also the Department's exceptional bridge list, a category of bridges determined in most urgent need of replacement, totaled 261 bridges in 1982.

"The Department can't repair or replace the bridges as fast as they are deteriorating," Hunter says. Bridge costs range from $60,000 to more than $50 million. Declining Department finances barely make a dent in the needed work.

As one might expect, the number of limited and restricted bridges also increased. The number totaled 1,613 in 1982. Bridge closings were not unheard of either. A supplementary bridge on Route DD in Barry County closed when concrete arch deterioration and deck cracking made it structurally unsafe.

"Closing a bridge is an unpopular move because of the inconvenience it causes," Hunter says. But the inconvenience could be greater for a longer time period if bridge replacement wasn't possible, he adds. Driving 30 to 40 miles out of the way could be the alternative to driving the thousand or so feet over a bridge.

The possibility of bridge closing increases concerns the Department. As revenue continues its slump, less money will be available for bridge maintenance. That leads to more bridge closings and more need for bridge replacement. If these can't be met, not only will a high level of service become a thing of the past--so will basic transportation needs.

FISCAL PROGRAM CANCELLED

An important "first" occurred during 1982--but not one of which to boast. For the first time in 22 years, the Department did not develop its annual Right-of-Way and Construction Program. And as is the case with other curtailed programs, funding shortages and an uncertain funding future are the reasons why.

The Right-of-Way and Construction Program outlines yearly highway priority projects to be undertaken. Critical needs on the highway system are determined and matched with any federal money available to carry them out. They are then ranked in order of three sections of improvements.

The first section deals specifically with priority projects for which an anticipated contract will be let or right-of-way obligated before the end of the Program's current fiscal year. The second section contains a standby project listing which may be substituted for a project or programmed into the first section, should a project there become delayed or should additional federal money become available. Finally the third section contains projects approved for plans development.

"Because of our continued funding shortage, we were unable to award all the work programmed into the first year of the 1982 fiscal year Program," Chief Engineer Hunter says. "Those remaining projects kept us busy enough without fiscal 1983 programming."

Whether future Programs would face deferment was on official's minds as they watched voters reject the revenue-generating gas tax proposition in November. Two things did make the future appear brighter, however. The first was the possibility of additional federal funding via a proposed 5-cent gas tax increase. The second was minimal revenue generated from Proposition C passage. Although primarily an education funding measure, this one-cent increase in sales tax benefits the Department who receives a share of one-half cent of the sales tax on new and used automobiles.

Hopefully these two measures will make a Program for fiscal 1984 a reality.

AMTRAK RIDERSHIP DECLINES

A depressed economy during 1982 made for a depressed Amtrak ridership on Missouri's cross-state passenger trains. Fortunately, that decline didn't carry over to the on-time performance of those trains as well.

Even though 1982 ridership on the Missouri "Ann Rutledge" and "Mules" continued to surpass the national Amtrak average, ridership fell 9.2 percent within the state compared to 1981. During 1982, 115,874 people rode both trains that run between St. Louis and Kansas City. However, in 1981 that figure was 127,553.

"Ridership is tied to the general economic situation," J. Everett Mitchell, railroads director says. "We don't consider this a significant drop, however. Missouri routes still did better than many in the country. We know the ridership potential is there."

Like ridership, the on-time performance of both trains during 1982 still exceeds the national average. The combined on-time performance percentage of 91.8 was way above the 79.1 national performance percentage. The state

Indeed, Missourians have taken advantage of Amtrak rail options as an alternative transportation mode. Missouri began helping Amtrak subsidize the trains in 1979. During the first year of operation under the new funding program, 75,704 people rode the "Ann Rutledge." The "Mules" did not come into operation until late in 1980.

on-time performance percentage during 1981 was 91.5.

In terms of ridership, the "Ann Rutledge" carried more passengers than the "Mules." A total of 68,430 people rode the "Ann Rutledge" in 1982 compared to 47,444 riding the "Mules."

Where on-time performance was concerned, the opposite was true. The "Mules" boasted a 93.6 on-time percentage compared to an 89.9 percentage on the "Ann Rutledge."

HOW A POTHOLE IS BORN

A turn of the century visionary once said a highway was "a thing of beauty and a joy forever." Romantic, perhaps, but not very true because a modern, well-traveled highway does not last forever, and rough pavement and potholes do not promise much joy.

Even if the Department built a highway and never let anyone drive on it, it would not last forever. It would eventually fall victim to the destructive effects of Mother Nature--effects such as moisture, soil settling and temperature extremes.

Well, the Department does not build highways that are not driven on. When you combine the effects of vehicle wear with the effects of the environment, you get deterioration--deterioration which requires both regular and preventive maintenance.

The Department designs highways for the environment and wear, but there are many variables in highway construction. The Department tries to control as many of them as possible.

Its plans specify how much moisture the soil should contain, how compact the earth roadbed must be and what the paving mixture should contain. But highways are not designed to last forever. And there is a natural, uncontrollable factor in highway building. This is where problems can crop up.

Pavement cracks can also occur

because the soil the pavement rests on settles. If all roadbeds and fill material were of the same consistency, everything would be fine.

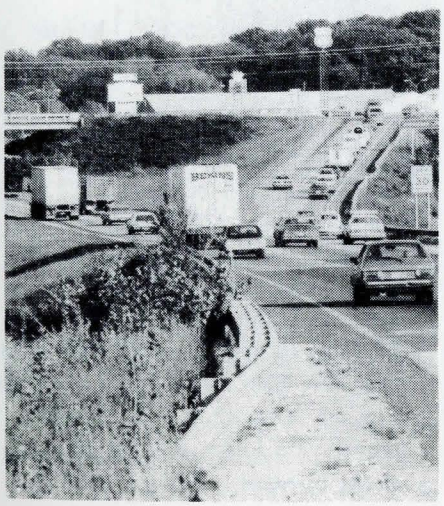
Different types of earth absorb moisture at different rates, so one highway section may settle while another one does not. The result can be another crack in the pavement or a hollow spot underneath it. When a vehicle hits the hollow spot, a pothole is born.

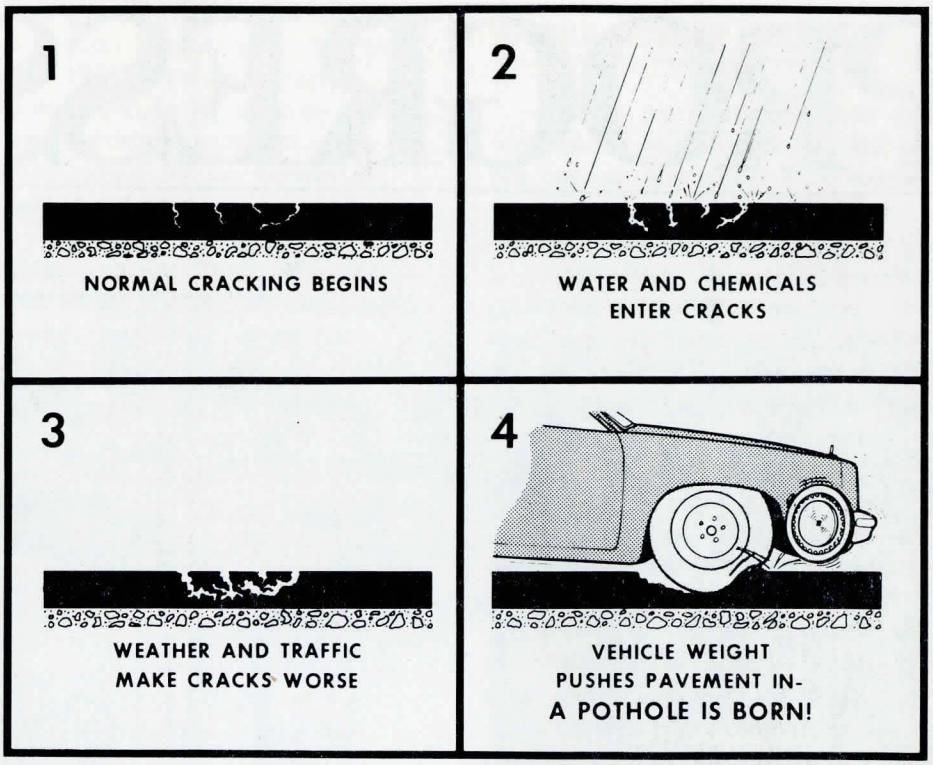
Potholes can also be caused by the formation of weak spots in the pavement from cracks and water damage.

Hot and cold weather cause problems, too. Concrete highways have joints at regular intervals to allow the surface to expand and contract with the weather. Sometimes the pavement expands too much resulting in a surface blowup or another crack. Often water can enter at the expansion joints, further contributing to damage.

What can happen to a highway? By their very nature concrete and asphalt highways will in time develop small cracks, commonly referred to as normal structural cracking. Water, the number one environmental enemy, enters these cracks and is absorbed by some of the materials in the pavement.

In winter this absorbed moisture





freezes and expands, causing the pavement to break up. The constant passing of cars and trucks over these cracks forces the water deeper into the pavement, causing more breakup.

In hot weather asphalt surfaces soften and can be pushed out of shape or rutted by heavy loads and high traffic volumes. In cold weather asphalt can shrink, also causing cracks.

The repetition of heavy loads over damaged sections increases the chance of serious pavement breakup. Highways are designed for specific loads. But combined with the elements these loads become just one more factor which necessitates needed maintenance work.

Missourians' desire for a year-round driving surface also contributes to highway deterioration. Salt and other chemicals spread on highways during winter to keep them driveable hurt the surface. If these chemicals sink into cracks, there is even more damage. Add to this the damage done by studded snow tires, and the situation is made even worse.

Given normal maintenance like patching and crack sealing and a little preventive maintenance like resurfacing, a highway should stand up to traffic and the environment for 20 to 25 years. But the amount of traffic, the effects of the environment and the frequency of maintenance are the final determinants in how long it will actually last.

To remain driveable a normal highway needs to be resurfaced after about 12 to 20 years, depending on the type of surface. However, because of financial limitations the Department is not able to keep up with the resurfacing work which needs to be done. And this work does need to be done because the state highway system carries more than 24 billion miles of vehicular travel a year.

Highway maintenance, and especially wise preventive maintenance, extends Missouri's highway investment. But the day is quickly coming when the Department will not be able to do these things. If this stage is reached, the state's economy and the quality of life will deteriorate right along with the highway surfaces.

PROGRESS

GRAND GLAIZE BRIDGE AHEAD OF SCHEDULE

There they stand--six strong concrete and steel bridge piers all in a row. For those who watched these first upshoots of the new Grand Glaize bridge grow above the Lake of the Ozarks, it was an exciting seven months. Not only was a dream coming true in Camden County, it was coming true way ahead of schedule. And for Lake-goers across the state, that's cause for the excitement to spread.

Massman Construction Company, Kansas City, finished the substructure work for the new bridge in Osage Beach almost 10 months ahead of schedule. Actual work began April 13, 1982. By November 20 it was done. It didn't have to be completed until October 1, 1983, according to the contract.

Why the accelerated progress? Chief Engineer Robert N. Hunter attributes it to good organization and execution. There were no problems, he says. And no time-costly developments or deviations from original plans.

The substructure work cost $2,854,000 with Massman utilizing new above-water pier drilling techniques, says Jim Toft, Department District 5 construction engineer. Toft is responsible for all highway and bridge construction supervision falling within the District 5 Jefferson City area.

"Twelve individual 110-foot pier shafts were anchored and drilled into 20 feet of bedrock at the lake bottom," Toft says. "Each was filled with 65,000 pounds of reinforcing steel caging and approximately 310 cubic yards of concrete. Altogether, each shaft weighs 450 tons."

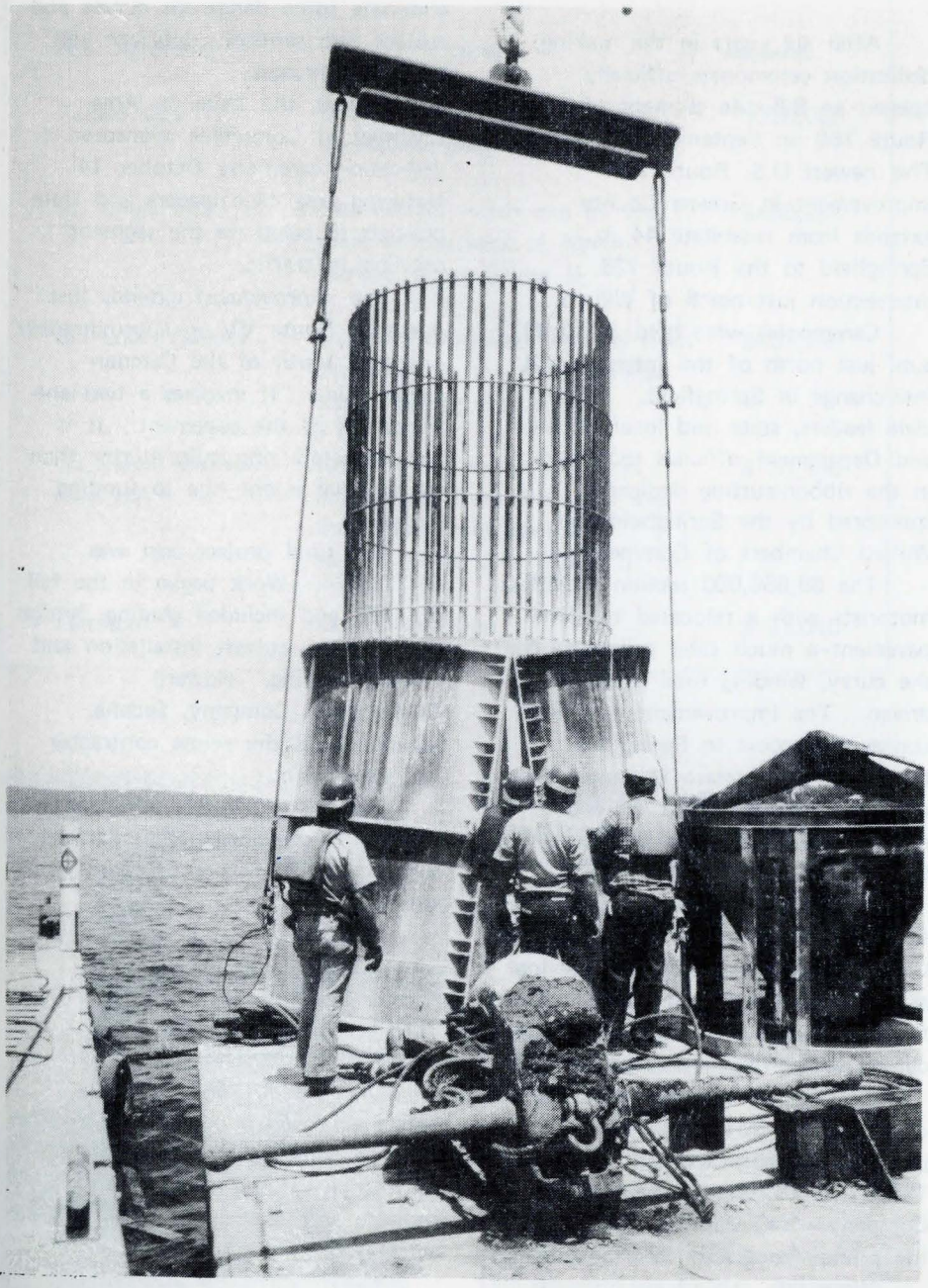
Some underwater work was required to remove drill shaft forms near the lake surface once concrete had set. The forms will remain around the lower 80 feet of each shaft, however.

Massman completed its contract obligation by constructing 6-foot concrete caps linking the 12 shafts into six piers ready for superstructure work to begin.

Don Branham, the Department's resident engineer in Camdenton, oversaw the construction progress at the work site and monitored it along with Toft.

When completed the bridge will span 1,648 feet and feature two 12-foot lanes. Hunter says bridge completion is expected in May or June 1984. The superstructure contract will be let early in 1983. Lake traffic can expect to drive over their "dream" in the summer of 1984--if not sooner.

As for the old Grand Glaize bridge? Hunter says it will stay right where it is for the time being, possibly for pedestrian use only.



Massman construction workers remove pier shaft forms after concrete has set around the reinforcing bar cage. Reinforcing bars extend from top of pier ready for a concrete cap to link it with a twin pier.

AMTRAK STOPS ADDED

Amtrak popularity continued to catchhold in Missouri during 1982 as one new permanent and three special temporary stops were scheduled on the rail passenger service.

Residents of Harry S. Truman's hometown of Independence now have roundtrip access to Kansas City and St. Louis on the Amtrak "Mules" and "Ann Rutledge" as of April 25, 1982. Now Independence riders can depart for St. Louis as early as 9:21 a.m., spend a big portion of the day and night there before returning to Independence on the 10:09 p.m. "Ann Rutledge."

Other schedule possibilities allow for Independence departure in the early evening or return from St. Louis in the early afternoon.

The Independence depot is located at 800 South Grand.

Meanwhile, a successful special stop during 1981 in Hermann for the town's Maifest celebration led to similar special stops in 1982.

More people were able to share in the fun as those stops included both the Hermann Maifest in the spring and its Octoberfest in the fall. Trains also stopped in Washington for its August Town and Country Fair.

"The 1981 stop in Hermann was the most successful special stop in Amtrak's history," Chief Engineer Robert N. Hunter says. "It was so overwhelming that for the 1982 Maifest two more trains were added to serve customers turned away in 1981."

A total of 3,700 passengers traveled in or out of Hermann during the May 15-16 Maifest, compared to 2,400 the previous year. The addition of trains and reserved seating helped eliminate confusion and crowding.

The same town's Octoberfest during the first three October weekends celebrated a tribute to fall. Thousands of visitors enjoyed winery and historic home tours as well as

German band music and wine-tasting during both season's celebrations.

The same festive atmosphere prevailed with those who took advantage of the Washington stop August 7 and 8. The oldtime, country-style Town and Country Fair featured a variety of exhibits, top-name entertainment and a carnival mid-way.

All special stops were part of Amtrak's efforts to serve communities along the St. Louis--Kansas City line, as well as the rest of the state.

The Department provides partial funding for the Amtrak lines. Trains serve St. Louis, Kirkwood, Jefferson City, Sedalia, Warrensburg, Lee's Summit, Independence and Kansas City.

ROUTE 63 IMPROVED IN PHELPS COUNTY

Substantial safety improvements and traffic congestion relief were two benefits to celebrate as officials cut the ribbon on a new six-mile U. S. Route 63 improvement in Phelps County.

The improvement extends from the Maries County line south to the north urban limits of Rolla, Missouri, providing motorists with a relocated two-lane pavement. The new alignment eliminates several bad curves and three narrow culvert-type bridges.

The total cost of the project was $7,622,510. Work was completed in two phases. The initial phase began in 1977 and included grading, culvert and bridge installation. The W. J. Menefee Construction Company of Sedalia was the prime contractor for the job.

The second phase involved actual roadway paving. This work began in the summer of 1981 with Howard Construction Company of Sedalia serving as the prime contractor.

Dedication ceremonies were sponsored by the Rolla Area Chamber of Commerce on September 7, 1982.

Work was carried out through the District 8 Springfield office under the supervision of District 8 Engineer V. B. Unsell.

DEDICATION MARKS ROUTE 160 OPENING

After six years in the making, dedication ceremonies officially opened an 8.5-mile segment of U.S. Route 160 on September 28, 1982. This newest U.S. Route 160 improvement in Greene County extends from Interstate 44 in Springfield to the Route 123 intersection just north of Willard.

Ceremonies were held at 10:30 a.m. just north of the Interstate 44 interchange in Springfield. Area civic leaders, state and local officials and Department officials took part in the ribbon-cutting dedication sponsored by the Springfield and Willard Chambers of Commerce.

The $9,556,000 section provides motorists with a relocated two-lane pavement--a much safer substitute for the curvy, winding road previously driven. The improvement is a more convenient access to Springfield through the Interstate 44 connection, while eliminating congestion and maintaining good access in the Willard area on the other end.

Initial work on this project was started in 1977. With Bridges & Company, Inc. of Springfield serving as the prime contractor, this first-phase work included grading and culvert and bridging installation.

Department funding reductions caused delays in letting the second phase paving contract until January 1982. The Clarkson Construction Company of Kansas City served as the prime contractor for the paving.

Work was carried out through the District 8 office in Springfield under the supervision of V. B. Unsell, District Engineer.

ROUTE 5 SEGMENT OPENS IN LACLEDE COUNTY

A 1.8-mile highway improvement doesn't seem like a great distance of which to boast. But don't tell the people in Laclede County or District 8 that. Their newest Route 5 improvement stretches no longer than 1.8 miles, but that's just enough to eliminate some dangerous curves and replace two seriously deficient and hazardous bridges.

In fact, the Lebanon Area Chamber of Commerce sponsored a dedication ceremony October 14 featuring area civic leaders and state officials to celebrate the segment opening to traffic.

The improvement extends just north of Route VV to approximately one mile south of the Camden County line. It involves a two-lane relocation of the pavement. It is approximately one mile shorter than the original intent due to funding cutbacks.

The total project cost was $1,771,174. Work began in the fall of 1981 and included grading, bridge construction, culvert installation and roadway paving. Howard Construction Company, Sedalia, Missouri, was the prime contractor for the project.

The District 8 Springfield office oversaw the construction under the supervision of District Engineer V. B. Unsell.

BOND ISSUE BENEFITS PORT AUTHORITIES

On June 8, 1982, Missouri voters approved a plan to allow the state to issue $600 million in bonds to finance various construction projects and also create new jobs across the state.

The Department also benefits from this plan. Eighteen million dollars are provided for highway projects while another 18 million is

provided for non-highway transportation purposes, such as port authorities.

These bonds will be issued over a five-year period and will have to be paid off within 25 years.

When a financial firm buys the bonds the money will go into the state's Third State Building Fund to pay for the various construction projects, which have to be approved by the Missouri Legislature.

Specifically, the first port authority projects were authorized during 1982 under the provisions of the bond issue by the Missouri General Assembly. Five projects relating to port development were funded in this first year of the five-year program.

1982 STATE BOND ISSUE PROJECTS

Port Authority	Project	Amount
Kansas City	Extend water mains into the downtown port site	$200,000
St. Louis City	Reconstruct north end of the dock at the foot of North Market Street (Phase I)	$458,254
St. Louis County	Extend Hoffmeister Avenue from Broadway to the Old National Lead Facility (Phase I)	$437,750
Southeast Missouri Regional	Right-of-way to construct an access road from Route N into the Grays Point port site east of Scott City (Phase I)	$ 34,500
Pemiscot	Land acquisition	$ 73,040

GOODHART APPOINTED COMMISSION VICE-CHAIRMAN

Roy H. Goodhart, Hannibal Commissioner, was named February 5 to succeed as Commission vice-chairman. The position was previously held by Roy W. Jordan, Clayton Commissioner, whose term expired December 1, 1981.

Goodhart has served on the Commission since appointed by Governor Joseph Teasdale in February 1978 to a six-year term ending in October 1983. Jay B. Dillingham, Kansas City, remains as Commission chairman, a position he assumed in February 1978.

Goodhart is president of the Commerce Bank of Hannibal, a position he has held since 1970. He is a graduate of the School of Banking, Madison, Wisconsin.

Goodhart was previously vice-president and cashier of the First National Bank, Centralia; assistant cashier of the Farmers and Merchants Bank, Hannibal; and personnel director at Wendt-Sonis, Hannibal.

He has served or is currently serving in the following positions in community organizations: board member and treasurer of Hannibal-LaGrange College, Community Chest board member, YMCA board member, member of the Missouri State Chamber of Commerce and the Hannibal Chamber of Commerce, St. Elizabeth Hospital board member, Boy Scouts of America board member, past president of the Kiwanis Club, Hannibal County Club member and member of the Fifth Street Baptist Church.

Goodhart and his wife, Clarita, have three children.

AMTRAK HOLDS FAMILY DAY

Trains, balloons, hot dogs, engineer hats and door prizes were among the featured attractions at the Amtrak Family Day August 28 at Lohman's Landing in Jefferson City, Mo.

The display was viewed by over 7,000 people and was the first ever held in mid-Missouri. Held to acquaint people with trains and the services they provide, that was a record number for a community the size of Jefferson City.

The seven-car display included an F40 locomotive, two communcations cars, an Amfleet coach, a superliner diner, sleeper and coach. Walk-through tours of the equipment was conducted with press tours getting an early-bird chance on the day before.

SCHIERHOLZ NAMED COMMISSIONER

William F. Schierholz Jr., president of Chemtech Industries, Inc., St. Louis, filled the void left by Roy W. Jordan, Clayton Commissioner whose term expired at the end of 1981. Schierholz was appointed by Governor Christopher S. Bond to a six-year term beginning January 1, 1982.

Schierholz, 60, has served as president of Chemtech (prior to 1961 known as St. Louis Solvents and Chemical Company) since 1956 after serving in a variety of positions with the company. In 1943 he received a bachelor of science in engineering administration from Washington University in St. Louis. He served in the U. S. Army Air Force from 1942 to 1946. He received a commission in 1944 and was a captain at the time he left the service.

Schierholz was named Missouri's 1981 Business Leader of the Year by the Missouri State Chamber of Commerce. He is a member of the board of directors of the St. Louis Savings and Loan Association and General Metal Products Company. Prior to his appointment to the Commission, he was serving as vice chairman transportation, Regional Commerce and Growth Association.

A few of his many involvements include: President's Association, American Management Association, American Association of Industrial Management, Missouri State Chamber of Commerce, Chemical Manufacturers Association, Committee for Responsible Consumerism, and the St. Louis Area Council--Boy Scouts of America.

Schierholz is married to the former Joan Flavin and they have three children.

LAFFOON SUCCEEDS AS DISTRICT 10 ENGINEER

With spring came the retirement of District 10 Engineer Lionel Murray and the naming of his successor, Allen F. Laffoon.

Laffoon was a field liaison engineer in the Maintenance and Traffic Division at the Jefferson City headquarters office at the time of his appointment. He assumed his new duties on April 1, 1982.

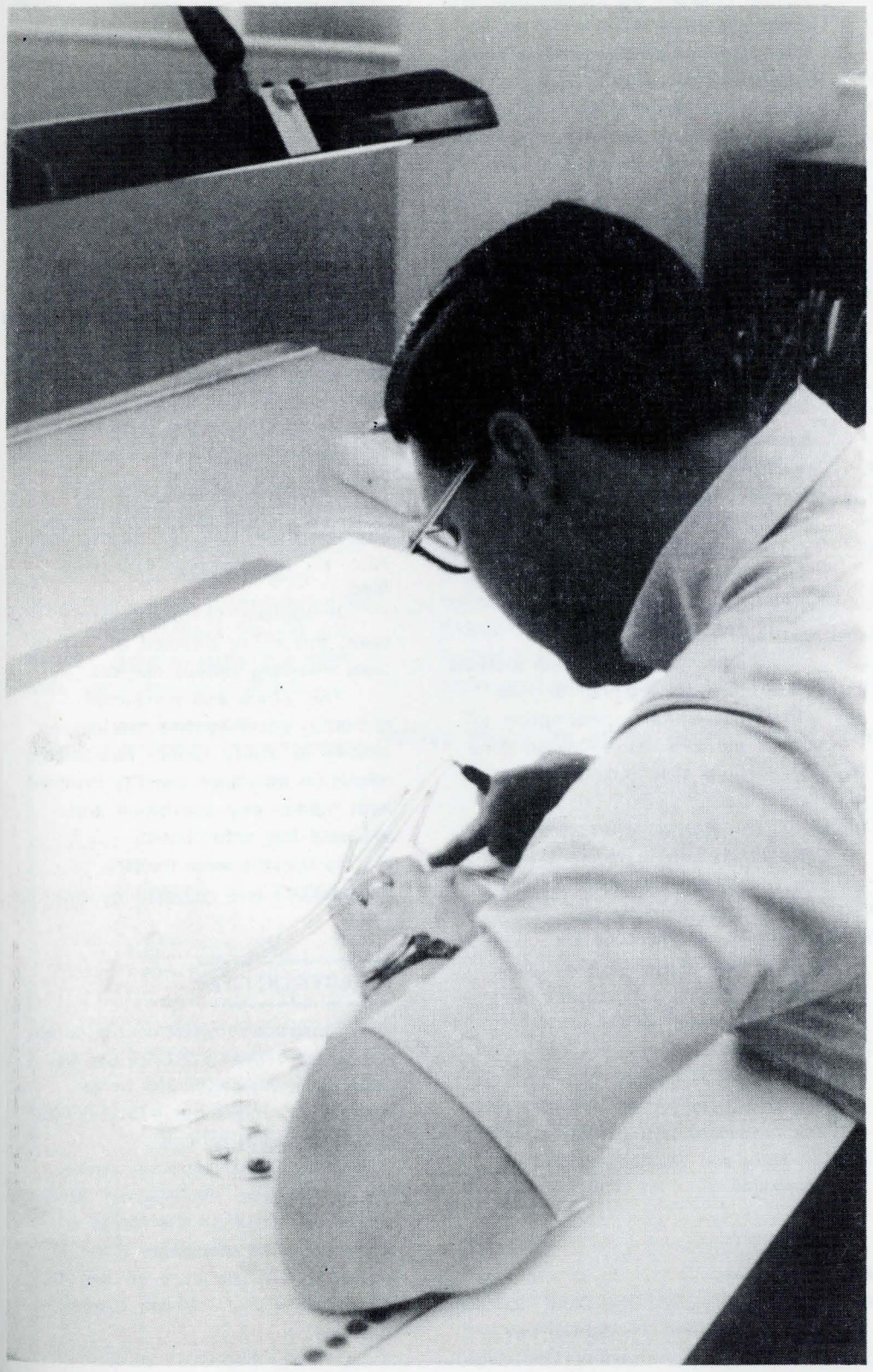
The 43-year-old engineer began his career with the Department in 1962 after graduation in 1961 from the University of Missouri--Columbia (UMC) where he received a bachelor of science in civil engineering. While in school Laffoon worked for the Department during the summer months. In 1974 he also received a master of science in civil engineering management from UMC.

In addition he has served the Department as an engineer inspector I, II and III, a senior construction inspector, a resident engineer, an assistant to the District construction engineer, a District construction engineer and a planning traffic engineer.

During his career he has worked in District Offices in Kansas City, St. Joseph and Sikeston. As the District 10 engineer he will oversee highway and transportation work in the counties of Bollinger, Butler, Cape Girardeau, Dunklin, Madison, Mississippi, New Madrid, Pemiscot, Ripley, Scott, Stoddard and Wayne.

Laffoon, a professional engineer and registered land surveyor, was born in Kansas City, Missouri. He graduated from Southeast High School, Kansas City, in 1956. He served in the U. S. Army for a six-month period during 1961. He and his wife, Sue, have two children, Cathy and Gary.

DIVISIONS



PERSONNEL

Personnel provides assistance to the Department regarding personnel management matters such as employment, affirmative action, employee development and training, employee relations, wage and salary administration, retirement and the interpretation and uniform administration of personnel policies.

The Department is an Equal Opportunity Employer. Affirmative Action Programs remain a high priority and significant progress continues. Recruiting efforts are conducted by both the Personnel Division and the 10 District Offices to locate qualified minorities, including females and other protected group applicants, for Department job opportunities.

New employee orientation and training is primarily conducted through the Department's supervisors. Personnel provides new employees with several publications to familiarize them with the Department's function, regulations and employee benefits.

Personnel supplements employee training periodically with a supervisory skills seminar. Tailored specifically to Department policies and needs, the seminar includes emphasis on the supervisor's role in administering a successful affirmative action program. It is held at the University of Missouri campus and instructed by their personnel.

The Department operates, in conjunction with the University of Missouri, a "Co-Operative Civil Engineer Training Program," Coordinated by Personnel, this work-academic program provides promising civil engineering students with on-job training by alternating work with attendance at the University of Missouri. Students graduating from this program have actual experience in highway and transportation engineering, and become productive with minimal orientation and training.

Internal training programs, conducted by Department staff, are held as specific needs indicate. As an example, during 1982 the Maintenance and Traffic Division conducted training sessions for traffic studies personnel on signal controls.

To encourage good Department-employee relations, all personnel transactions are reviewed by Personnel to attain uniform salary administration and policy application. Job evaluations are conducted to maintain accurate job specifications and internal salary equity. To maintain an adequate salary structure and employee benefits program within budgetary limitations, Personnel conducts compensation surveys to formulate recommendations. A review of prior wage service credit awarded employees toward retirement continues to determine equity under the present retirement statutes.

Further data processing applications were made to the centralized personnel records, permitting quick access to data required for state, federal and management information reports. The Unemployment Insurance Program for employees also continued.

The Department had 5,641 salaried employees on December 31, 1982, compared to 5,855 on December 31, 1981. Due to budgetary restraints, no temporary employees were employed during the summer. Temporary employees were employed for emergency work such as road maintenance during snow storms only as absolutely necessary. The Department has reduced salaried employees from 6,941 in 1970, primarily through attrition, as revenue declined.

During 1982, 189 employees were processed for retirement. Nineteen were between ages 55-59 with 15 or more years' service; 125 were between ages 60-64 with 15 or more years' service; 19 were between ages 65-70, and 26 qualified for disability benefits. Early retirement prior to age 65 continues to be the trend. The Highway Employees' and Highway Patrol Retirement System is paying benefits to 2,001 Department retirees or eligible survivors.

As part of its Affirmative Action Program the Department is committed, under Title VI, to assure minority and female-owned business enterprises are afforded every opportunity to participate in state and federally-assisted programs as contractors, consultants and suppliers.

The Department has reduced the size of selected contracts to provide more entry opportunities for smaller, less experienced minority and female-owned firms. The Department has also allowed joint ventures in order to provide more entry opportunities.

The Department distributes annually an updated list of Missouri and surrounding area minority and female-owned businesses to all contractors qualified to bid on work and to political subdivisions having initiated FAU projects, encouraging them to use these firms when possible.

Bidders on construction projects in Missouri are required to take affirmative action in attempting to utilize minority female-owned firms on portions they intend to subcontract.

Through its affirmative efforts, $20,494,112.45 in federal-aid contracts and subcontracts were awarded to minority and female-owned firms by the Department during calendar year 1982. This is a significant increase over last years' awards of $13,303,478.16.

The Department will continue its efforts to further minority and female-owned business participation in state and federally-assisted programs.

LEGAL

During 1982 the Chief Counsel's office instituted 14 right-of-way condemnation proceedings for state highway projects involving 60 land tracts. A total of 175 condemnation cases were settled by final judgment. Twenty-six appellate court decisions were made in cases involving the Commission. Final case judgments recovered by $1,835,105.06 previously paid into the court in commissioners' awards.

The sum of $654,836.84 was collected on 1,880 damage claims to Commission-owned property. There were 40 actions filed in court for damage collection where voluntary payment could not be obtained.

During the year, 59 actions were filed in court against the Commission. Thirty-six involved alleged torts, most of which claimed defects in highway facilities. Six petitions were filed to enforce the Beautification Program in reference to junkyard maintenance. Nine petitions were filed for review of Commission decisions concerning outdoor advertising sign maintenance. Also, six miscellaneous suits were filed.

In addition to condemnation cases, this office disposed of 74 cases involving various matters.

This office also conducted numerous administrative hearings relating to utility facility relocation, relocation assistance benefits involved with right-of-way acquisition and billboard law enforcement.

In miscellaneous matters, $376,680.03 was collected by this office.

CONSTRUCTION

Construction work continues on Interstates 170 and 270 in the St. Louis area, Interstate 229 in St. Joseph, and Interstates 435 and 670 in the Kansas City area. Construction was active on three new bridges over the Missouri River, plus repair work on the Route 54 bridge over the Mississippi River at Louisiana. Repair work on the ASB Bridge in Kansas City was completed this year.

Cost for inspection of

construction projects was maintained at a low level by upgrading equipment, additional personnel training and further reduction in personnel.

Awards were made on 163 construction projects in 1982. This represents 451 miles of road construction.

One hundred forty-three projects included Federal-Aid, while twenty projects were financed entirely by state funds. The money value of the awards, including engineering and non-contractual costs, totaled $156 million.

MONEY VALUE OF 1982 AWARDS

Interstate System	$ 65 million
Primary System	$ 76 million
Supplementary System	$ 12 million
Non-Contractual Cost	$ 3 million
TOTAL	$156 million

The Interstate system contracts involved new construction, upgrading existing dual facilities to Interstate standards, rest areas, highway beautification and implementing the latest safety features for highway traffic. Approximately 5.3 miles were completed to Interstate standards this year. An additional 50 miles of existing Interstate pavement were resurfaced with asphaltic concrete this year. There are now under construction approximately 12.5 miles of Interstate road.

The Primary and Supplementary system contracts include construction work costs in rural and urban areas. Projects were financed either with federal-aid or with 100 percent state funds. They include new construction, bridge replacements, widening and resurfacing projects. Where applicable, the latest safety features were included.

SURVEYS & PLANS

Surveys and Plans is responsible for plan preparation and letting contracts for highway improvements. Plan preparation includes necessary field surveys and photogrammetric surveys for route location. Most projects require public contact and coordination with local, state and federal agencies. One or two formal public hearings obtain public input and explain the need and purpose of each major highway improvement.

Assessment of environmental impacts for each project are considered. This includes air quality evaluations, noise studies, and cultural, social and economic considerations.

Prior to letting highway improvements, right-of-way is acquired, arrangements are made for disposition of utility conflicts, and permits and licenses as applicable are obtained from state and federal agencies.

In 1982, 11 lettings were held and construction projects totaling $151,328,525 were placed under contract. An average of 4.85 bids were received per project.

Prices decreased during 1982 with the Missouri average composit cost index closing at 148.1 compared to base year 1977. The 1982 cost index reflects a 5.4 per cent decrease when compared with the 1981 cost index of 156.6.

The Surveys and Plans Division also administers several federal-aid programs that provide funding for city, county and rail highway safety improvements.

ACTIVE PROJECTS AS OF DECEMBER 31, 1982

System	Awarded In 1979	Awarded In 1980	Awarded In 1981	Awarded In 1982	Total
FEDERAL-AID					
Interstate	0	3	11	26	40
Primary	1	0	18	46	65
Supplemental	0	0	3	17	20
Off-System	0	0	1	0	1
Sub-Total (FA)	1	3	33	89	126
100 PERCENT STATE FUNDS					
Interstate	0	0	0	2	2
Primary	0	0	0	12	12
Supplemental	0	0	2	4	6
Sub-Total (St.)	0	0	2	18	20
GRAND TOTALS	1	3	35	107	146

The Federal-Aid Urban Program provides federal funding for street and highway construction in cities and urban areas over 5,000 population. During 1982, approximately $20,931,000 was obligated in cities throughout the state for this program. The FAU funds are generally used to finance 75 percent of the cost of eligible projects with local jurisdiction providing the 25 percent matching funds.

The Off-System Bridge Rehabilitation and Replacement Program provided federal funds for bridge repair and replacement on county roads not on the federal-aid system. During 1982, approximately $1,650,064 was obligated for projects qualifying for this program.

The Rail-Highway Safety Program provided federal funding to improve rail-highway crossing safety. Contracts were completed for about 50 signal installations. The remaining 110 locations are under negotiation for railroad signal placement on and off the federal-aid system. This includes 100 city street locations. The cost of this program is $5,500,000. A program started in 1978 to provide the minimum required warning devices at all railroad crossings in the state was 99 percent completed as of December 1982. Upon completion, this program will involve placement of approximately 5,000 reflectorized crossbucks, 6,400 advance warning signs and 2,035 advance pavement markings. The cost of the program is $1,200,000.

Federal-aid funds were used to improve the railroad grade crossings rideability. Low volume crossings were improved with a bituminous surface. High volume crossings were improved with a rubber or concrete surface. In 1982, 30 low volume and 35 high volume crossings were improved.

The following table provides a resume of awarded projects for 1982:

1982 REPORT	AWARDS	MILES	PROJECTS
Interstate System	$67,816,207	86.372	40
Primary System	64,063,230	195.896	71
Supplementary	19,449,088	65.265	36
Total: Construction by Contract	151,328,525	347.533	147
Maintenance Work by Contract	1,939,316	120.942	13
Off-Systems Roads Contract	1,090,733	1.798	9
FAU Funds (Awarded on State System)	2,557,924	1.154	5

An archaeological team works at uncovering an Indian firepit dating back to 800 A.D. along highway right-of-way prior to roadway construction.

MATERIALS & RESEARCH

Materials and Research is responsible for the quality of materials used in the maintenance and construction of the Missouri highway system. Additionally, research regarding materials, design and procedures for improved performance or reduced costs is routinely conducted by the Division. The designs for all bituminous and concrete mixtures are also provided by this Division.

Field inspection, including testing, sampling and approval of materials used in highway maintenance and construction, is performed by personnel assigned to the 10 Districts. The Division provides staff assistance and advice to the District personnel regarding materials inspected and any new procedures required.

The Division's Central Laboratory, located in Jefferson City, is a nationally recognized and approved laboratory for highway materials testing. For the fourth year in a row, the Laboratory has received a perfect score from the American Association of State Highway and Transportation Officials Reference Laboratory inspection team.

All materials requiring specialized testing are shipped to the Central Laboratory. To insure uniformity of testing procedures through the state, many of the

materials tested in the field are also tested in the Central Laboratory. A total of 26,498 samples were tested in the Central Laboratory during 1982, including those of an experimental or investigative nature. Quantities of commonly used materials inspected, tested and approved in 1982 are shown in the table contained in this report.

Twelve major research projects were underway in 1982. The research included investigation of recycled materials and new procedures for control of soil erosion, methods to recycle existing pavements, special systems to help prevent bridge deck deterioration, performance of various pavement designs and the study of concrete pavement deterioration. Many smaller projects such as condition surveys for individual bridges and investigation of proposed new highway materials were completed.

As a portion of the Department's continuing efforts to conserve materials and cut costs, the first asphaltic concrete recycling project on a state highway was constructed in 1982. The concept of recycling asphaltic concrete is certainly not new and has been investigated many times in the past.

Laboratory Technician Gene Blackburn checks results of a tensile strength test performed on a reinforcing steel bar on the Baldwin 300,000-pound Universal Testing Machine. The bar was pulled and stretched to its breaking point to determine its strength.

However, the economics of the times usually made the use of new mixes more practical. In recent years, the spiraling material costs such as asphalt and aggregates costs, as well as the new technology of cold milling and drum mix have made recycling increasingly attractive. The Department's experimental project has shown recycling to be a workable and economical method of asphaltic concrete pavement reconstruction.

Subsurface information required to base decisions on materials used to build highways and bridges was obtained by drilling equipment and personnel headquartered in Jefferson City. Division personnel conducted special investigations on various geotechnical matters including foundation stability and settlement, slide corrections, soil and material surveys, retaining structures, bridge foundations, sinks and caverns and mine subsidence.

1982 COMMONLY USED MATERIALS INSPECTED, TESTED AND APPROVED

Aggregates	7,882,205	tons
Cement	344,356	tons
Reinforcing Steel	19,807	tons
Culvert Pipe		
Corrugated Metal	47,576	linear feet
Reinforced Concrete	61,759	linear feet
Joints - Bituminous, Fiber	74,048	linear feet
Joints - Rubber	21,901	square feet
Guardrail	133,163	linear feet
Posts, Metal	64,162	posts
Lumber and Square Posts	317,997	board feet
Piling and Round Posts	1,394	linear feet
Bituminous Material		
Cutback	16,064,444	gallons
Penetration	3,197,150	gallons
Emulsified	29,439,145	gallons
Asphalt Cement	18,042,229	gallons
Paint	598,640	gallons

ACCOUNTING

The accounting and expenditure control for the Department is the responsibility of Accounting. All of the Department's records of financial transactions are processed and recorded by this Division.

Based on anticipated revenues and disbursements, the Division prepares legislative budget requests, as well as annual internal budgets.

The Division reviews all payment documents for accuracy, priority of payment and to determine if funds are available prior to recording and certification for payment.

The Division processed 158,211 checks during 1982, which represents disbursements of $431,631,885.48. Disbursements through gas tax refunds and other state departments from highway funds equaled $74,631,885.48. Total disbursements for 1982 equaled $505,993.44.

Worker's Compensation benefits and medical care payments are made by the Department's insurance carrier. However, these payments are routed through Accounting and recorded to insure absolute accuracy of fiscal records. There were 601 Workers' Compensation cases processed this year.

The Division has the responsibility for administering the regulations and policies of the Highway Employees' and Highway Patrol Medical and Life Insurance Plan. As of December 31, 1982, there were 8,748 health insurance plans and 7,146 life insurance plans in force. For the period from January 1, 1982, through December 31, 1982, there were 21,124 health claim payments with $7,974,752.77 paid out in benefits and 17 life claims with $85,684.87 in benefits paid to survivors.

MAINTENANCE & TRAFFIC

During 1982 total roadway mileage maintained by the Division increased 13 miles to total 33,908 miles. This included recreational access roads, outer roadways, ramps, service roads and maintenance agreement sections.

A major expenditure is on low-type, bituminous-surfaced routes. To reduce this expenditure the maintenance surface treatment program has been reduced. In 1982, 2,474 miles of maintenance leveling course was budgeted and 86.2 miles of contract leveling course was completed. This was the first contract leveling course done since eliminating this program in 1980.

A major objective for cost and energy control continues to be cutback asphalt usage reduction. In 1982, 65 percent of the total asphalt used was emulsified asphalt.

The Department continued to build pool parking areas in and adjacent to metropolitan areas. This program started in 1975 with construction of 717 spaces. Since then 3,400 parking spaces were added either through new construction or expansion of existing lots. In December 1982, 4,117 spaces were available, 253 of which were added in 1982 for a yearly increase of seven percent. The average daily usage in the last quarter of 1982 was 2,405 cars, compared to 2,465 during the same quarter in 1981. In 1975 an average of 42 percent of available spaces were used. This increased to 58 percent in the last quarter of 1982.

During 1982, 74,042 overdimension, overweight and overdimension/overweight special permits were issued throughout the state.

In 1982, 220,000 right-of-way acres were mowed. In addition, $1,342,000 was spent on litter pickup. This is a 20 percent reduction from 1981 expenditures.

Approximately 6,510 bridges on the state highway system were inspected during 1982. Division repair crews completed structural repairs on 83 bridges. Division bridge crews completed painting 178 bridges during the year. Also 88 or 1.4 percent of state highway bridges were treated with linseed oil and mineral spirits to protect the bridge deck.

The Department is now maintaining 20 rest areas on the Interstate system. Four include tourist information centers.

Efforts to control Johnsongrass continued where required. Approximately 6,400 acres were sprayed by contract. Approximately 7,600 acres were sprayed by Maintenance forces.

There were 74,042 overdimension, overweight and overdimension/overweight special permits issued during 1982. Of these, 18,048 or 24 percent were issued by the 10 District offices.

The 1981-1982 winter was more severe than the 1980-1981 winter. Severe winter storms in the St. Louis area resulted in increased chemical usage. Snow and ice control costs were $18,320,325--an 88 percent increase over 1980-1981 costs.

Various other maintenance activities included upgrading and installation of traffic control equipment, and monitoring traffic flow to determine problem traffic congestion.

There were 722 billboards removed by property owners and 98 removed by state forces under the Outdoor Advertising Laws and Regulations.

Activities funded from 402 Program Funds under the 3+ Standards of the Missouri Highway Safety Program and coordinated by the Department are as follows:

*The Traffic Engineering Assistance Program--40 studies were conducted in 36 political subdivisions during 1982. The average cost of

these studies was $2,728 per study.

*The Bridge Engineering Assistance Program--structural adequacy reports and inventories were conducted on approximately 106 bridges and two countywide planning studies were completed during the year costing $120,000.

The Sign Reclamation Plant continues as a major money saver for the Division. In operation since 1977, 79 percent of the metal signs provided to Districts were reclaimed signs from this plant. During 1982, 55,561 metal signs or 231,655 square feet of metal sign material was reclaimed. Other component parts of sign hardware were also salvaged by the plant. A savings of $1.35 per square foot or $312,000 for signing and $34,400 for other component signing parts was realized. The savings to the state through this operation during 1982 amounted to approximately $346,400.

In 1982 the Department continued to operate under a reduced striping program developed in 1980. As a result, 56,900 miles of stripe was placed in 1982 compared to approximately 71,900 miles prior to 1980.

The Maintenance Management System continues to take shape. The major addition in 1982 was the expansion of the Maintenance Material Inventory to include virtually all materials stored on Maintenance lots.

RIGHT-OF-WAY

During 1982 the cost of right-of-way acquired for highway construction totaled $6,453,295.

The Division acquired 260 parcels -- 221 by negotiated settlement (85 percent) and 39 by condemnation (15 percent).

Payments totaling $433,729.65 were made in 1982 under the Relocation Assistance and Payment Program to assist displaced families, business and farm operations in relocating. During the year 133 relocation claims were processed and paid.

During the year, the Right-of-Way Division obtained appraisals for 375 parcels. Two separate appraisals were prepared for 20 percent of these parcels, making a total of 450 appraisals produced. An average of 30 parcels were appraised each month, which required an average production of 36 separate appraisals per month.

Receipts from sale of improvements on right-of-way acquired for highway construction and from sale of excess property totaled $246,448.57.

Rental of advance acquisitions and excess property resulted in an income of $167,776.63.

EQUIPMENT & PROCUREMENT

This Division is responsible for procuring and maintaining an equipment fleet that will efficiently and effectively carry out Department functions. At the close of 1982 the Division was maintaining 5,798 rental units consisting of passenger cars, trucks, carryalls, tractors, mowers, motorgraders and various miscellaneous units. This is a reduction from 1981 of 149 units.

The continuing reduction in the rental units number did not result in a usage reduction in 1982 due to a snow removal activities increase during January and February. However, it has resulted in a better utilization per unit record.

During 1982 a change to 15W-40 engine oil was made along with a change to a multi-viscosity universal type hydraulic fluid. This should result in a substantial reduction in the inventory requirements for these petroleum products.

Fuel used in the fleet in 1982 increased approximately 11 percent over 1981 due primarily to the more severe winter. However, the total cost for fuel was up only slightly due to a decrease in the unit fuel cost.

The computer class codes for the fleet were expanded during the year to produce more accurate and usable cost information. Also the oil exception report was revised to help pinpoint problem units, as well as breakdowns in preventive maintenance.

It required 6,873,679 gallons of gasoline, 185,055 gallons of kerosene and 1,684,679 gallons of diesel fuel to operate the fleet. In addition, 17,660 gallons of anti-freeze, 92,743 gallons of lubricating oil, 37,611 gallons of hydraulic oil and 88,772 pounds of multi-purpose gear oil and lithium grease were used. Tires and tubes costing $914,298.95, tire chains costing $58,861.05 and shop equipment, parts and supplies totaling $3,981,729.17 were contracted for during the year.

The Division is also charged with the responsibility of providing all tools, supplies and materials that are required in Department operation.

1982 HIGHWAY SYSTEM MAINTENANCE MATERIALS

Various Types of Asphalt	43,548,400	gallons
Gravel	518,280	cubic yards
Stone and Chat	1,111,350	tons
Paint	391,476	gallons
Reflectorizing Spheres	1,835,650	pounds
Sodium Chloride (Winter 1981-82)	90,964	tons
Calcium Chloride (Winter 1981-82)	4,615	tons
Agricultural Seed	33,940	pounds
Treated Wood Sign Posts	26,530	each
Steel Sign Posts	26,550	each
Grader Blades	242,713	pounds

The Headquarters Sign Shop produced a total of 67,821 signs and markers of various shapes and sizes amounting to $698,850.08 during the year.

As a cost cutting measure, other types of supplies and equipment are produced at the Headquarters Garage as time and labor are available.

PUBLIC INFORMATION

In addition to regular responsiblities, Public Information shouldered a new task during 1982. With the Proposition B gas tax increase going before voters in November, the Division spent a majority of its time and effort informing Missourians how its passage would benefit highway users. Specifically, the Division handled the "26 Club"--an employee program aimed at obtaining voter support, and produced countless Department factbooks, factsheets and new releases to inform voters of the Department's additional revenue need. Special highway signs and displays were posted in the Highway Gardens at the Missouri State Fair as staff passed out literature and talked about those needs to those strolling through the area. A newly-developed needs slide show also informed viewers in the Highway Gardens theatre.

However, business also went on as usual. Public Information responded to numerous public questions and comments. One million official highway map requests were filled by the Division. Approximately 300 news releases were dispursed to various media throughout the state.

The Highway and Transportation NEWS, the Department's employee newspaper, continued monthly publication. It, too, played a vital role in communicating Proposition B and "26 Club" information. Speeches and displays were also developed by the Division.

The state-wide newspaper clipping service continued, keeping officials informed of Department coverage and comment. The Department's technical library continued to be housed in the Division.

Again, the Division coordinated the Department 25-year service awards banquet. The biennial and annual reports for the Department were also prepared and distributed.

Picnickers took advantage of the shady State Fair Highway Gardens while special highway signs informed them of the Department's bleak financial situation.

PLANNING

Planning collects, analyzes and processes financial, historical, traffic and other data used in the development of highway needs, the highway improvement program and financial projections.

Information required to update the National Highway Performance Monitoring System was prepared and the report was completed. Physical and geometric data were updated for publication of the Interstate, Primary and bridge service ratings. Studies were conducted to determine statewide highway and bridge deficiencies. The 1982 Highway Right-of-Way and Construction Program was monitored and updated where necessary for awards of contracts, program additions and revisions.

Planning for transportation needs in urban areas was continued. In the urbanized areas of St. Louis, Kansas City, Springfield, St. Joseph and Columbia, a formal comprehensive transportation planning process was carried on cooperatively with local officials. Establishment of a formal transportation planning process in Joplin was initiated.

The annual travel accident report was prepared. This report includes the travel, accidents, accident rates and related data by state and federal highway systems. Traffic data for maintenance scheduling reports were completed for the Kansas City and St. Louis freeway systems. These reports indicate the hours that maintenance operations requiring lane closure could be conducted without reducing the level of service below an acceptable level.

Traffic volumes and data on the number of cars and different sizes of trucks were gathered on the state highway system for use in designing, maintaining and programming projects. In order to gather this information, approximately 4,445 vehicle counts and 114 vehicle classification studies were made throughout the state. Travel on the state highway system leveled off with no appreciable increase between 1981 and 1982. Speed data was obtained throughout the year by monitoring 34 separate locations for a minimum of 24-hour periods.

Twenty-five county highway maps were revised or redrafted as the material became available. Also 166 city street and urban vicinity maps were updated.

The following table shows the status of the state highway system as of December 31, 1982:

STATE HIGHWAY SYSTEM STATUS

(as of December 31, 1982)

SYSTEM	ROAD MILES
Interstate	1,123.918
Primary	6,832.785
Supplementary	24,239.016
TOTAL	32,195.719
TYPE	
Oiled Earth	0.000
Granular	4.274
Low Type Bituminous	24,944.962
High Type Bituminous	4,398.363
Concrete	2,848.120
TOTAL	32,195.719

BRIDGE

The Bridge Division is responsible for all bridge structure designs on the state highway system. During 1982, 48 designs were completed for letting. Of these, 37 were major system route designs; 11 were designed for supplementary routes.

The combined length of new structures contracted during 1982 was 25,986 feet and cost $25,522,514. Structures for supplementary routes constituted 1,257 feet of this total amount. These cost $2,229,497.

The above figures include portions of two large bridges for substructure work. These work contracts are on the Route 9 Missouri River bridge at Kansas City and the Route 54 bridge over the Glaize Arm of the Lake of the Ozarks in Camden County.

The Division also prepared 23 designs for repairing, widening or extending 6,117 feet of existing bridges at a cost of $2,801,202.

Under the Federal Highway Administration Off-System Program, the Division prepared six designs for county bridge replacement.

Besides structure design, the Division assisted in inspection and rating of off-system, county and municipally-owned bridges as part of the Federal Highway Administration Bridge Replacement and Bridge Rehabilitation Program.

TRANS— PORTATION

AVIATION

The purpose of Aviation is to promote the travel mode and to encourage safety and the development of airports and other aviation facilities within the state. Aviation personnel may provide technical advice to any airport sponsor or others interested in the planning, acquisition, construction or expansion of an airport.

Aviation provides financial assistance to Missouri cities, towns or counties through two grant programs. The Capital Improvement Grant Program provides financial assistance to sponsors of publicly-owned airports for planning, construction or expansion. Funds under this program are granted on a 50 percent state/50 percent local matching basis.

Under the airport maintenance program funds may be granted to airport sponsors on a 75 percent state/25 percent local basis for maintenance on runways, taxiways, parking aprons and for emergency repairs. Financing for this program is derived from the unrefunded portion of the motor fuel tax applied to aviation gasoline. A portion of the unrefunded fuel tax is used for the annual publishing and distribution of the Missouri Aeronautical Chart and Airport Directory.

As a result of the Airline Deregulation Act of 1978, Aviation monitors the small community Essential Air Service Program which is regulated by the Civil Aeronautics Board. The Act requires all actions affecting the air service to smaller communities must be coordinated with state aviation agencies.

Under a contractual agreement with the Federal Aviation Administration, Aviation inspects the general aviation airports, both publicly and privately owned, throughout the state.

Missouri has a total of 393 airports: 118 are publicly owned and 275 are privately owned. There are 4,465 active general aviation

aircraft and 14,688 active pilots in the state. Nine airports provide scheduled air transportation and enplaned approximately 8 million passengers in 1982.

Aviation provided 24 capital improvement grants for a total of $326,119 and 21 maintenance grants totaling $248,761. The Missouri Aeronautical Chart and Airport Directory was published for a cost of $12,428.

There were 137 airports inspected under the FAA Aviation Master Record (5010) Program and 124 obstruction evaluations performed during 1982.

Under the Third State Bond Program approved in 1982, Aviation submitted nine proposed airport projects to the Legislature. Four projects were approved for funding and funds totaling $1,457,106 were authorized.

Contracts were entered into between the State of Missouri, the State of Illinois, East-West Gateway Coordinating Council and Bucher, Willis and Ratliff Consulting Engineers for the accomplishment of the St. Louis Metropolitan Area General Aviation System Study. The study period will take approximately two years at a cost of $149,800.

RAILS

Station improvement plans surfaced for three Amtrak stations with action taken on one plan. The Jefferson City Amtrak Station was relocated to the historic Lohman's Landing area located adjacent to the Governor's Mansion. Also proposals to reopen the Warrensburg depot to Amtrak passengers, as well as including the St. Louis Amtrak facility in revitalization of the Union Station complex have been analyzed by the section.

A proposal to extend Amtrak service from St. Louis to Carbondale, Illinois, was examined. The proposal involves extension of the St. Louis/Kansas City Mules to carry passengers to Carbondale and a connection with the southbound City of New Orleans. This connection could expand travel options and allow good access to New Orleans and the 1984 World's Fair.

Railroads were involved in three major activity areas during 1982: rail planning, rail project implementation and the Amtrak rail passenger 403(b) program.

Rail planning maintains the railroad as a viable transportation alternative able to compete with the various modes. A healthy, competitive rail system providing required public services is the section's goal.

Rail planning also provides an overview of the state's rail system condition. The objective here is to develop programs to improve the physical track condition and return rail lines to financial soundness.

Additionally, other rail issues affecting the state were addressed during this year such as the Missouri Pacific/Union Pacific/Western Pacific merger, the Norfolk and Western/Southern Railway merger, and various trackage rights and protective conditions sought by competing railroads in regard to these mergers. Also addressed were the Rock Island situation, the proposed Grand Trunk/Milwaukee Road merger and the proposed acquisition by Soo Lines of Rock Island trackage in Missouri.

Three local rail service assistance projects were either undertaken, continued or completed during 1982. Total funding of these projects (funded by combination of local and/or railroad monies and federal funds available through the Local Rail Service Assistance Program) totaled $8.9 million with retaining benefits to the state of $19.4 million. These three projects were:

1. La Due, Missouri to the Missouri/Kansas state line--track and bridge rehabilitation on 58.6 miles of track to upgrade line to Class III Safety Standards--40 mph operating speed. Total project cost was $2,839,000 with actual project completed in August 1982.

2. Nevada, Missouri to the Missouri/Kansas state line--project called for 20 miles of rail renewal to replace 90-pound jointed rail with 112-pound continuous welded rail plus other track material and turnouts. Resurfacing, bridge adjustments and other work, while not included, will be performed by the railroad itself. This project began in July 1982 and was approximately 99 percent completed by the end of the year. Total project cost is $3,555,000.

3. Rockville, Missouri to Nevada, Missouri--project called for an additional 15 miles of rail renewal and other work to be performed. Preliminary work on this project began in late 1982 with actual installation scheduled for spring 1983 at a total cost of $2,555,000.

Though facing severe available funding decline under the LRSA program, current plans call for another rail renewal project on approximately 25 miles of track from Rockville, Missouri to La Due, Missouri in 1983.

Missouri's Amtrak 403(b) railroad passenger service during this year continued. The Ann Rutledge began its fourth operational year under a match funding ratio of 50 percent federal/50 percent state funds. The St. Louis/Kansas City Mules begain its third year of operation also under the same funding ratio.

On August 27-28, 1982, Jefferson City hosted Amtrak "Family Days" equipment show featuring Amtrak's new long-distance "Superliner" equipment.

A passenger survey aboard the Amtrak 403(b) trains between St. Louis and Kansas City was initiated by staff in June. Four phases have been completed and results tabulated. These results identify problem areas and assist in fine-tuning the service to better fit Amtrak rider needs.

WATERWAYS

Waterways provides technical assistance to Missouri port authorities in promoting private capital investment, in increasing commerce volume and in free trade zone establishment within their port districts. Every city or county situated upon a navigable waterway may form a port authority. Ten port authorities have been formed along the Missouri and Mississippi Rivers prior to 1982. Several communities have expressed an interest during the year in becoming a part of this program. By year's end, one application to form a regional port authority had been received by the Department.

In addition to providing technical assistance, Waterways also provides funding to assist the port authorities in port site development. During 1982, $357,170 in grants were made to nine port authorities and the Bi-State Development Agency (the coordinating agency for the Port of Metropolitan St. Louis).

These funds are used by the recipient for managerial, engineering, legal, research, promotion, planning and other non-construction related expenses.

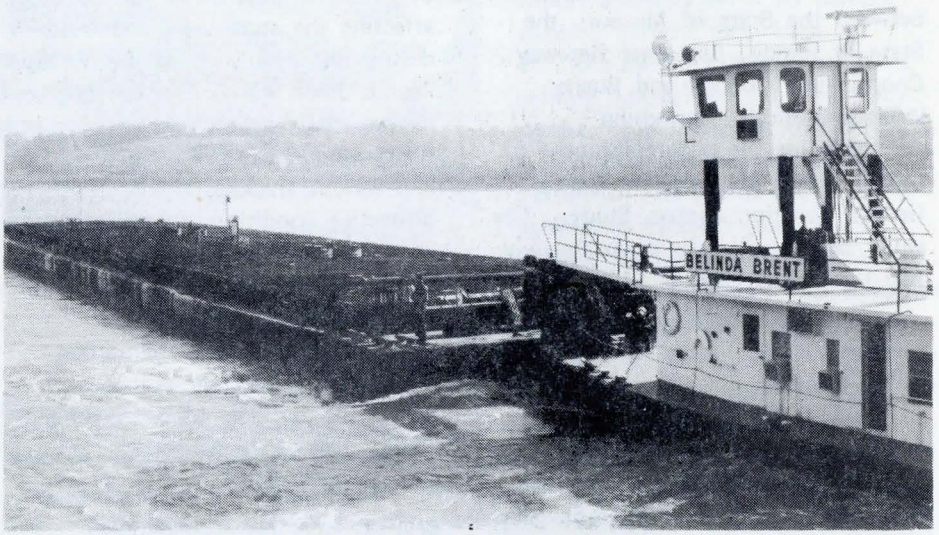
The update of the "Statewide Waterborne Commerce and Port Development Plan" was completed during 1982. The recommendations and conclusions contained in the report are considered an integral part of the planning process for Waterways' programs.

During 1982, the first projects were authorized by the Missouri General Assembly under the provisions of a $600 million statewide bond issue. Five projects relating to port development were funded in this first year of the five-year program.

Additional projects were considered for funding under this program and were submitted for authorization Missouri General Assembly during 1983.

1982 STATE BOND ISSUE PROJECTS

Port Authority	Project	Amount
Kansas City	Extend water mains into downtown port site	$200,000
St. Louis City	Reconstruct north end of dock at the foot of North Market Street (Phase I)	458,254
St. Louis County	Extend Hoffmeister Avenue from Broadway to the Old National Lead Facility (Phase I)	437,750
Southeast Missouri Regional	Right-of-way to construct an access road from Route N into the Grays Point Port Site east of Scott City (Phase 1)	34,500
Pemiscot	Land acquisition	73,040



PORT SITE DEVELOPMENT GRANTS

Kansas City Port Authority	$ 35,453
Howard/Cooper County Regional Port Authority	39,367
St. Louis County Port Authority	20,000
St. Louis City Port Authority	35,453
Bi-State Development Agency	25,999
Jefferson County Port Authority	26,471
Southeast Missouri Regional Port Authority	55,779
Mississippi County Port Authority	28,362
New Madrid County Port Authority	35,925
Pemiscot County Port Authority	54,361
	$357,170

TRANSIT

Transit assists in the planning, development and operations of public transit systems and specialized paratransit systems in the state. This function is carried out through administration of state and federal programs relating to public transportation with specific programs for the elderly and handicapped.

The Missouri Elderly and Handicapped Transportation Assistance Program provides state financial assistance for nonprofit organizations offering elderly and handicapped transportation services at below cost rates. In 1982, $657,190 state general funds were matched with approximately $1,971,570 federal funds to subsidize elderly transportation services. In addition, $380,197 state general funds were matched by $380,197 county, city or other local funds to provide essential transportation for other transportation disadvantaged. Total monetary assistance generated by this program was approximately $3,389,154.

Transit also administers funds made available by the U. S. Urban Mass Transportation Act of 1964, as amended. Under Section 18 money is available for planning, capital and operating assistance of public transit systems in non-urbanized Missouri areas. An inventory of local transportation services and a statewide transit plan were completed during 1982. In addition, transit studies were completed for 12 cities during the year.

During 1982, $1,907,914 in federal funds were approved for local capital and operating projects. Federal funds may be used to match local funds for capital purposes on an 80 percent/20 percent local basis. Federal funds also may be used to defray 50 percent of a transit system's operating losses.

Another section of the UMTA Act provides federal capital and operating assistance to transit systems in urbanized areas (over 50,000 in

population). The Department administers this program for Columbia, Springfield and St. Joseph. In 1982, the Department approved for payment $1,442,434.20 in federal aid to the transit systems in the three eligible areas.

Capital assistance to nonprofit organizations giving transportation service to the elderly and handicapped is provided by Section 16(b)(2) of the Act. In 1982, this program provided over $570,864 in federal assistance. This was matched with over $142,716 in local funds for the purchase of 31 vehicles, wheelchair lifts, ramps and similar equipment for elderly and handicapped transportation.

FINANCES

Receipts

BASIC REVENUE:		
Motor Vehicle License	$109,475.762.87	
Motor Bus & Truck Fees	3,395,666.00	
Motor Vehicle Use Tax	17,114,953.35	
Drivers License Fees	4,353,990.11	
Reciprocity Fund Interest	297,271.25	
Motor Vehicle Inspection Fees	1,952,212.00	
Motor Fuel Tax Receipts	149,687,964.60	
Vehicle Sales Tax Receipts	23,568,896.44	
Sub-Total		$309,846,716.62
INCIDENTAL RECEIPTS:		
Refunds - Highway Fund	$ 156,010.72	
Refunds - Road Fund	16,940,305.49	
Political Subdivisions	1,869.18	
Sub-Total		17,098,185.39
FEDERAL REIMBURSEMENT:		
Federal Highway Administration	$193,271,953.77	
Corps of Engineers	2,533.74	
Sub-Total		193,274,487.51
MISCELLANEOUS ESCROW FEES		103,624.97
INTEREST INCOME - ROAD FUND		10,268,423.17
MISSISSIPPI RIVER PARKWAY COMM. (General Revenue)		7,232.43
TRANSPORTATION RECEIPTS:		
General Revenue Fund	$ 2,949,112.31	
Federal Fund	5,092,469.12	
Transportation Trust Fund	318,498.55	
Aviation Trust Fund	308,680.05	
Sub-Total		8,668,760.03
TOTAL RECEIPTS		**$539,267,430.12**

Expenses

CONSTRUCTION	$248,848,601.42
MAINTENANCE	137,592,329.16
ADMINISTRATION	29,707,256.32
O.A.S.I. (HIGHWAY)	6,055,454.89
GAS TAX REFUNDS	6,599,899.05
TRANSPORTATION FUNCTION	9,428,243.69
OTHER STATE DEPARTMENTS	67,754,813.48
MISSISSIPPI RIVER PARKWAY COMM.	7,232.43
TOTAL DISBURSEMENTS	**$505,993,830.44**